

**AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

**LISTING OF CLAIMS:**

1. (original): A polypeptide which comprises amino acid numbers 37 to 346 in the amino acid sequence represented by SEQ ID NO:2, or a polypeptide of a sulfotransferase which comprises an amino acid sequence having substitution, deletion, insertion, addition and/or transposition of at least one amino acid in the amino acid sequence and has activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor.
2. (original): The polypeptide according to claim 1, which consists of the amino acid sequence represented by SEQ ID NO:2.
3. (original): The polypeptide according to claim 1, which consists of amino acid numbers 37 to 346 in the amino acid sequence represented by SEQ ID NO:2.
4. (currently amended): The polypeptide according to ~~any one of claims~~ claim 1 ~~to 3~~, wherein the glycosaminoglycan is heparin or heparan sulfate.
5. (currently amended): A sulfotransferase which comprises the polypeptide according to ~~any one of claims~~ claim 1 ~~to 4~~ and has activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor.

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6. (currently amended): A nucleic acid selected from the group consisting of (I), (II) and (III):
- (I) a nucleic acid which encodes:  
the polypeptide according to ~~any one of claims claim~~ 1 to 4, or the  
a sulfotransferase which comprises the polypeptide according to claim 5 1 and has  
activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which  
is a sulfate group acceptor;
- (II) a nucleic acid which consists of the nucleotide sequence represented by SEQ ID NO:1  
and
- (III) a nucleic acid which hybridizes, under stringent conditions, with:  
the nucleic acid according to (I) or (II) or a nucleic acid which consists of the nucleotide  
sequence represented by SEQ ID NO:1 or  
a nucleic acid consisting of a nucleotide sequence complementary to the nucleotide  
sequence of the nucleic acid according to (I) or (II) or the nucleotide sequence represented by  
SEQ ID NO:1.

Claim 7. (Canceled)

Claim 8. (Canceled)

9. (currently amended): An expression vector which comprises the nucleic acid  
according to ~~any one of claims claim~~ 6 to 8.

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10. (original): A recombinant which comprises the expression vector according to claim 9.

11. (original): A recombinant which comprises a host cell into which the expression vector according to claim 9 is introduced.

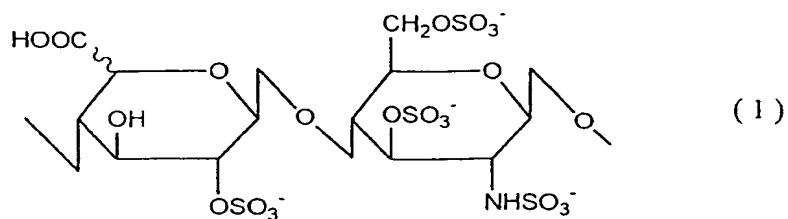
12. (currently amended): A process for producing a polypeptide or a sulfotransferase, which comprises:

growing ~~the a~~ recombinant which comprises the expression vector according to claim 10 ~~or 11~~ 9 or a recombinant which comprises a host cell into which the expression vector according to claim 9 is introduced, and

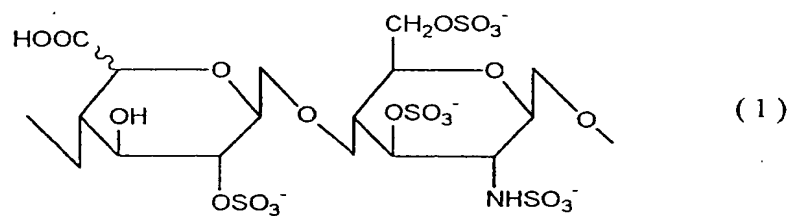
recovering the polypeptide according to ~~any one of claims claim 1 to 4 or the a~~ sulfotransferase which comprises the polypeptide according to claim 5 1 and has activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor group acceptor from the obtained grown recombinant.

13. (currently amended): An enzyme agent for synthesizing a glycosaminoglycan comprising the structure represented by the following formula (1), which comprises the polypeptide according to ~~any one of claims claim 1 to 4 or the a~~ sulfotransferase which comprises the polypeptide according to claim 5 1 and has activity of transferring a sulfate group from a sulfate group donor to a glycosaminoglycan which is a sulfate group acceptor:

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14. (original): A process for producing a glycosaminoglycan comprising the structure represented by the following formula (1), which comprises reacting the enzyme agent according to claim 13 with heparin or heparan sulfate to transfer a sulfate group from a sulfate group donor to a sulfate group acceptor:



Claim 15. (Canceled).